

## 1. Hello, World

In your editor, put the following program and save it in a text file HelloWorld.java:

```
/**
 * Displays a "Hello World!" message on the screen
 */
public class HelloWorld
{
    public static void main(String[] args)
    {
        System.out.println("Hello, World!");
    }
}
```



**In Java, names of files are case sensitive.**

This is true even when you run programs in a *Command Prompt* window. Make sure you type in the upper and lower cases correctly.

In the little program above, HelloWorld is the name of a class as well as its source file. (Don't worry if you don't quite know what that means, for now.)

**The name of the file that holds a Java class must be exactly the same as the name of that class (plus the extension .java).**

This rule prevents you from having two runnable versions of the same class in the same folder. Make sure you name your file correctly. There is a convention that the name of a Java class (and therefore the name of its Java source file) always starts with a capital letter.

**The Java interpreter calls the `main` method in your class to start your program. Every application (but not an applet) must have a `main` method. The one in your program is:**

```
public static void main(String[] args)
```

For now, treat this as an idiom. You will learn the meaning of the words `public`, `static`, `void`, `String`, and `args` later.

`System` is a class that is built into all Java programs. It provides a few system-level services. `System.out` is a data element in this class, an object that represents the computer screen output device. Its `println` method displays a text string on the screen.

**Examine what you have typed carefully and correct any mistakes — this will save time.**

### DO 3. More Greetings

Now we can try a program that will *prompt* you for your name and then display a message. You can modify the previous program. Start by saving a copy of it in the text file `Greetings2.java`.

```
/*
   This program prompts the user to enter his or her
   first name and last name and displays a greeting message.
   Author: Maria Litvin
*/

import java.util.Scanner;

public class Greetings2
{
    public static void main(String[] args)
    {
        Scanner kboard = new Scanner(System.in);
        System.out.print("Enter your first name: ");
        String firstName = kboard.nextLine();
        System.out.print("Enter your last name: ");
        String lastName = kboard.nextLine();
        System.out.println("Hello, " + firstName + " " + lastName);
        System.out.println("Welcome to Java!");
    }
}
```



Our `Greetings2` class uses a Java library class `Scanner` from the `java.util` package. This class helps to read numbers, words, and lines from keyboard input. The `import` statement at the top of the program tells the Java compiler where it can find `Scanner.class`.

```
Exception in thread "main" java.lang.NoClassDefFoundError: greetings2 (wrong
name: Greetings2)
    at java.lang.ClassLoader.defineClass1(Native Method)
    at java.lang.ClassLoader.defineClass(ClassLoader.java:620)
    at java.security.SecureClassLoader.defineClass(SecureClassLoader.java:124)
    at java.net.URLClassLoader.defineClass(URLClassLoader.java:260)
    at java.net.URLClassLoader.access$100(URLClassLoader.java:56)
    at java.net.URLClassLoader$1.run(URLClassLoader.java:195)
    at java.security.AccessController.doPrivileged(Native Method)
    at java.net.URLClassLoader.findClass(URLClassLoader.java:188)
    at java.lang.ClassLoader.loadClass(ClassLoader.java:306)
    at sun.misc.Launcher$AppClassLoader.loadClass(Launcher.java:268)
    at java.lang.ClassLoader.loadClass(ClassLoader.java:251)
    at java.lang.ClassLoader.loadClassInternal(ClassLoader.java:319)
```

Wow! The problem is, you entered `greetings2` with a lowercase “G”, and the Java interpreter cannot find a file called `greetings2.class`. Remember: Java is case-sensitive. You can see now why you might want some help from an IDE!

Try again:

```
C:\mywork> java Greetings2
```

Now the program should run: it prompts you for your first and last name and displays a greeting message:

```
C:\mywork> java Greetings2
Enter your first name: Virginia
Enter your last name: Woolf
Hello, Virginia Woolf
Welcome to Java!
```